Cisco Media Gateway Control Node Manager 2.7(3)

Cisco® Media Gateway Control (MGC) Node Manager is a Cisco element manager for the fault, configuration, and performance management of the Cisco PGW 2200 Softswitch. Cisco MGC Node Manager integrates management access to all PGW 2200 components, effectively representing them as nodes to the network operator.

Product Overview

Cisco MGC Node Manager is a Cisco element manager for fault, configuration, and performance management of the Cisco PGW 2200 Softswitch. Cisco MGC Node Manager integrates management access to all node components, effectively representing them as a single entity to the network operator. The software provides views of individual managed devices and logical objects, such as trunk groups and signaling links, making it easier to manage the components that make up a voice-over-IP (VoIP) media gateway control node.

The devices managed are the Cisco PGW 2200 Softswitch (MGC), Cisco IP Transfer Point Link Extender (ITP-L), Cisco Billing and Measurement Server (BAMS), the Cisco PGW 2200 H.323 Signaling Interface (HSI), and the Cisco Catalyst® LAN switches. Cisco MGC Node Manager also includes the Voice Services Provisioning Tool (VSPT), the provisioning graphical user interface for the Cisco PGW 2200 Softswitch and Cisco BAMS, facilitating more effective deployment of voice services.

Key Features and Benefits

Table 1 lists advantages made possible by the network surveillance features in Cisco MGC Node Manager software.

Table 1. Network Surveillance

Feature	Benefit and Application
Alarm and event browser	Rapid fault detection helps increase service availability and customer satisfaction.
Alarm collection	Comprehensive fault detection, collection, and storage simplify activities in the network operations center (NOC) and help ensure faster response to problems.
Presence polling	Helps ensure that management communication is available and notifies if there is an interruption.
Map viewer	Easy access to important fault and inventory associations simplifies management of a large, evolving network.
Thresholding regimes	Proactive surveillance that detects trends before they begin to affect service can increase service availability.
Notification profiles	Notification can be in the form of alarms, display messages, e-mail, or pages to reduce missed events.
Event groups	Graphic fault summaries tailor fault displays to increase NOC productivity.

Cisco MGC Node Manager makes available the diagnostic toolbar, which is easily accessible from the MGC host object icon. A set of diagnostic tools, described in Table 2, is grouped for convenient access under the toolbar.

Table 2. Cisco MGC Node Manager Diagnostic Tools

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Feature	Benefit and Application
Call Trace Viewer	Results are displayed with flexible selection parameter options to help focus on problem areas quickly.
Log Viewer	Log viewer makes finding log information much easier by searching through log files for a match on user-defined search criteria.
Call Detail Record (CDR) Viewer	Formatted CDR display decodes records for easy access to desired information fields, helping reduce troubleshooting time.
Translation Verification Viewer	Dial plan is verified without passing live calls, helping reduce time needed to set up new customers.
Measurement Viewer	Direct access to stored measurement files on the MGC host with flexible selection criteria.

Cisco MGC Node Manager provides easy access to applications tailored for the current task and centralizes device configuration, database creation, and service provisioning. Table 3 describes key features.

Table 3. Provisioning and Configuration

Feature	Benefit and Application
Voice Services Provisioning Tool	A GUI simplifies provisioning for the Cisco PGW 2200 Softswitch. VSPT is now included with Cisco MGC Node Manager
Graphic device display	Menus display only those functions appropriate for the selected device and the user's access level, helping reduce operator error and training by removing the need to remember device names and login information.
Automatic synchronization	Database is synchronized to configuration changes made on the Cisco PGW 2200 Softswitch, reducing configuration steps and helping ensure accurate display information.
Automated discovery	Device discovery is controlled to retrieve the important physical and logical inventory details and avoid discovery of unwanted Simple Network Management Protocol (SNMP) devices, helping reduce deployment time for new networks and speed trials and lab testing.
CiscoView	CiscoView software is included to provide a standardized view and control of Cisco ITP-L, Cisco ITP and Integrated ITP on AS5350 and AS5400, and the Cisco Catalyst LAN switches, creating a familiar display for experienced CiscoView users.

User access-control and performance-management features are described in Table 4.

Table 4. User Access and Performance

Feature	Benefit and Application
Access control	Powerful control of user access allows system administration of users by group or function.
Performance management	Performance measurements are stored in the database, graphed on X/Y charts, displayed in tabular text format, and made available for export to identify long-term performance trends. Real-time performance statistics are also collected and displayed on demand.

Product Architecture

Cisco MGC Node Manager is a client/server management system that promotes distribution of the client component to scale upward, supporting additional operators in groups of 10 per client workstation. All client/server and server-to-network traffic is over TCP/IP using SNMP, FTP, command-line interface (CLI), X-terminal, and PGW 2200 Softswitch Man-Machine Language (MML).

Table 5. Managed Devices

Managed Device	Version
Cisco PGW 2200 Softswitch or MGC	v9.5(2) to v9.7(3)
Cisco ITP-L	Cisco IOS® Software Version 12.3(15)a
Cisco Integrated ITP	Cisco IOS Software Version 12.3(15)a

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Cisco Catalyst 5500 Series, Catalyst 2900 Series XL, and Catalyst 6509 switches supported directly by MGC Node Manager deep discovery and fault management; other Cisco LAN switches and ITP platforms supported by CiscoView for chassis views, monitoring, diagnostics, and control	Latest Version
Cisco BAMS	up to 3.30
Cisco PGW 2200 HSI	up to 4.3(2)

Table 6. Product Specifications

Feature	Description
Product compatibility	See managed devices in Table 5.
Software compatibility	Supports coresident operation with Cisco Voice Services Provisioning Tool, Cisco Extensible Provisioning and Operations Manager (EPOM), CiscoWorks LAN Management Solution (LMS), Universal Gateway Call Analyzer (UGCA), and Cisco Signaling Gateway Manager (SGM)
Protocols	SNMP, FTP, CLI, and MML
Components	Media kit, right-to-use license
Connectivity	X-terminal to presentation server: • TCP/IP • 1 Mbps required, 10 Mbps recommended Presentation server to management server: • TCP/IP • 10 Mbps LAN connection required Management server to the Cisco PGW 2200 Softswitch: • TCP/IP • 1 Mbps bursting
Features and functions	Fault, configuration, performance, and security management
MIBs	Cisco Element Management Framework MIB for northbound trap forwarding
Operating system	Solaris 8 and Solaris 10 (Solaris 10 is highly recommended for updates and required for all new installations – Solaris 8 is end of sale from Sun and will not be supported in future MGC Node Manager versions.

System Capacity

Cisco MGC Node Manager has been verified operational, managing up to 20 Cisco PGW 2200 Softswitch failover pairs. Response time depends on PGW calls per second, the number of operators, and the size of the Cisco MGC Node Manager server.

System Requirements

Table 7 lists the minimum system requirements for Cisco MGC Node Manager.

Table 7. Minimum System Requirements

Cisco PGW 2200 Softswitch Network Size	Small Network; 1–3 Operators; 1–5 Nodes; 24 Traps/Minute	Midsize Network*; 4–6 Operators; 6–10 Nodes; 36–42 Traps/Minute		Large Network; 7–10 Operators; 11–20 Nodes; 42–54 Traps/Minute	
	Single Machine	Presentation Server	Management Server	Presentation Server**	Management Server
RAM (GB)	2	2	2	2	4
Swap (GB)	4	2	4	2	8
Disk drives* (9 GB minimum)**	4	1	4	1	4-6
CPU	2 x 440 MHz	2 x 440 MHz	2 x 1.05 GHz	4 x 1.05 GHz	4 x 1.05 GHz

*Presentation and management servers may run coresident for midsize networks when faster Sun CPUs are

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used or operator loads are light. When combined, RAM and swap are added, while a total of four hard drives is sufficient. Adding more presentation servers increases the number of operators supported.
**Additional presentation servers may be added, if necessary, to maintain good operator response time in large networks with heavy alarm traffic. Additional operator support is planned for testing.
***A two-disk machine will work for smaller networks with less traffic and fewer operators. Response time to operator commands will slow down as the network grows and additional operators are added. Adding one or two additional disk drives can improve performance by supporting parallel access reducing overall seek time.

Cisco MGC Node Manager has been tested with Sun UltraSPARC II, III, and IV systems. Pure Sun products that meet or exceed the sizing recommendation are required to help ensure successful Cisco Software Application Support (SAS) for Cisco MGC Node Manager.

Ordering Information

Table 8 lists ordering information. To place an order, contact your Cisco sales representative or visit the Cisco Ordering Homepage and enter the product number CMNM. Use the configure button to display the options listed below.

Table 8. Ordering Information

Part Number	Product Name
CMNM	Cisco MGC Node Manager top-level part number
EMS-MNM-KIT-273K9	Cisco MNM 2.7(3) Media Kit Option
EMS-MNM-KIT273K9U	Cisco MNM 2.7(3) media upgrade kit. Requires previous version.
EMS-MNM-KIT273K9D	Cisco MNM 2.7(3) 30-day Demo Kit
EMS-MNM-LIC-273	Cisco MNM 2.7(3) Right-to-Use License Option – 1 per PGW RTU
EMS-MNM-LIC-273-U	Cisco MNM 2.7(3) Right-to-Use license upgrade – 1 per PGW RTU if no SAS in place

To Download Software Patches

Visit the Cisco Software Center for software patches.

Service and Support

Cisco delivers a wide range of service programs through a combination of people, processes, tools, and partners, resulting in high levels of customer satisfaction. Cisco services help you to protect your network investment, optimize network operations, and prepare the network for new applications to extend network intelligence and the power of your business. For more information about Cisco services, see Cisco Technical Support Services or Cisco Advanced Services.

For More Information

For more information about Cisco MGC Node Manager, visit http://www.cisco.com/en/US/products/sw/netmgtsw/ps1912/index.html.

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